

Torque Transducer

Type DRWPL (waterproof IP 67)

with Speed or Angle detection



Special features:

- waterproof (IP67)
- contactless
- build-in measurement amplifier
- single supply voltage
- wide application range

- small outline
- low moment of inertia
- speed detection (option)
- angle detection (option)

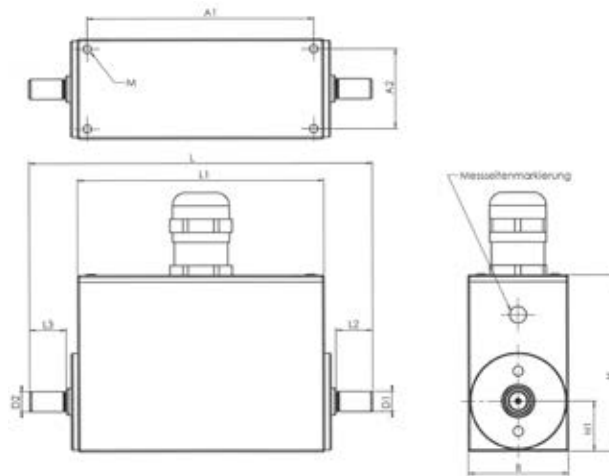
Description:

The torque transducers series DRWPL are prepared with several sealings, so that they correspond with the international protection IP67. For varying applications these transducers are available also with optional speed or

angle detection. The integrated measurement amplifier is supplied with 12V DC and outputs an analog signal of 0 to $\pm 10V$, which is galvanic isolated against supply voltage.

Supply Voltage:	12V DC $\pm 10\%$	Option Speed:	(n)
Current Consumption:	approx. 200mA	rev. max.:	up to 10 000 rpm *
Rise Time 10-90%:	2ms	Output:	Open- Collector
Limit Frequency -3dB:	200Hz	Internal Pull Up	10k Ω (5 V level)
Voltage Output:	0 to $\pm 10V$	External Pull Up	24 V max / 20mA
Internal Resistance:	100 Ω	Pulses/rev.:	60
Ripple:	< 100mV _{SS}	Option Angle:	(w)
Nonlinearity:	< 0,1%	rev. max.:	up to 3 000 rpm **
Hysteresis:	< 0,1%	Output:	Open- Collector
Deviation at zero point:	$\leq \pm 100mV$	Internal Pull Up	10k Ω (5 V level)
Maximum Measurement Fault:	0,1% (of full scale)	External Pull Up	24 V max / 20mA
Operating Temperature:	0-60°C	Pulses/rev.:	360
Compensated Temperature Range:	5-45°C	Resolution:	1°
Temperature Fault		Phase shift:	Channel A 90° at right spin of propulsion side
Zero Point:	0,02%/K		
Sensitivity:	0,01%/K		
Mechanical Overload:	100%		
Internal protection:	IP 67 DIN 40050		
Cable length:	2,5m (Standard)		
Connection:	6 pin coupler socket	With suitable external wiring	* 20.000 rpm
with option speed or angle:	12 pin coupler socket or with flying leads		** 15.000 rpm (or speed max.)

Mechanische Abmessungen:



Type	DRWPL-I	DRWPL-II	DRWPL-III	DRWPL-IV
Measurement range: [Nm]	0,1/0,2/0,5/1/2	5/10/20/50	50/100/200/300	500/1000/1500
Abmessungen:	Different measurement ranges on demand			
L [mm]	103	160	205	310
L1 [mm]	74	92	105	126
L2 [mm]	11	30	45	85
L3 [mm]	11	30	45	85
B [mm]	30	50	77	120
H [mm]	53	68	95	112
H1 [mm]	15	25	40	52
D1 Ø g6 [mm]	6	15	26	45
D2 Ø g6 [mm]	6	15	26	45
A1 [mm]	68	82	95	105
A2 [mm]	24	40	68	105
M	M3 x 5 deep	M4 x 8 deep	M4 x 8 deep	M6x10 deep
General tolerances DIN2768-m				
weight approx.: [g]	280	920	4925	8000
Drehzahl max.[1/min]	20.000	10.000	5.000	1.900

Technical Specifications:

The values for axial load and radial load refer to the non-fixed case

Type	Measurement Range [Nm]	Spring Constant C [Nm/rad]	Mass Moment of Inertia J [g·cm ²]	Max Axial Load[N]	Max Radial Load[N]
DRWPL-I	0,1	390	35	140	1,5
	0,2	390	35	140	1,5
	0,5	400	35	160	2
	1	470	35	210	3,5
	2	600	35	210	6,5
DRWPL-II	5	935	220	930	10
	10	2020	225	930	20
	20	3630	225	930	50
	50	5810	230	930	110
DRWPL-III	50	11030	1560	1820	60
	100	22200	1570	1820	130
	200	37400	1600	1820	250
DRWPL-IV	300	45800	1630	1820	380
	500	204847	11820	4160	522
	1000	288551	12053	4160	1019
	1500	325736	12319	4160	1502

Ordering example: DRWPL-I-0,2-w-2,5m

Torque transducer Type DRWPL-I measurement range 0,2Nm, option speed detection and 2,5m measurement cable with flying leads

Available Accessories: supply and display unit, couplings